BS 13700:2021



BSI Standards Publication

Permanent counterweighted guardrail systems — Specification



Publishing and copyright information

The BSI copyright notice displayed in this document indicates when the document was last issued.

© The British Standards Institution 2021

Published by BSI Standards Limited 2021

ISBN 978 0 539 13352 3

ICS 13.340.99; 91.220

The following BSI references relate to the work on this document: Committee reference B/514 Draft for comment 20/30415163 DC

Amendments/corrigenda issued since publication

Date Text affected

Contents		Page
	Foreword	iii
1	Scope	1
2	Normative references	1
3	Terms and definitions	2
	Figure 1 — Free-standing counterweighted guardrail system – PCGS components	3
4	General requirements	4
4.1	General	4
4.2	Materials	4
4.3	Non-metallic materials	4
4.4	Fasteners	5
4.5	Drainage	5
4.6	Finish	5
4.7	Welded assembly	5
5	Design requirements	5
5.1	General	5
5.2	Configuration	5
5.3	Counterweights	6
5.4	Partial safety factors	6
6	Test requirements	6
6.1	General	6
	Table 1 — Test requirements – Overview	7
6.2	Static tests	7
	Figure 2 — Horizontally outwards – Guardrails and posts	9
	Table 2 — Loadings and requirements for Figure 2	9
	Figure 3 — Horizontally outwards – Toeboard (optional)	10
	Table 3 — Loadings and requirements for Figure 3	10
	Figure 4 — Vertically downwards – Guardrails and posts	11
	Table 4 — Loadings and requirements for Figure 4	11
	Figure 5 — Vertically downwards – Toeboard (optional)	12
	Table 5 — Loadings and requirements for Figure 5	12
	Figure 6 — Horizontally parallel - Guardrails and posts	13
	Table 6 — Loadings and requirements for Figure 6	13
	Figure 7 — Horizontally parallel – Toeboard (optional)	14
	Table 7 — Loadings and requirements for Figure 7	14
	Figure 8 — Vertically upwards – System	15
	Table 8 — Loadings and requirements for Figure 8	15
	Figure 9 — Working wind + horizontal outward load – Guardrails and posts (principal	
	guardrail only)	16
	Table 9 — Loadings and requirements for Figure 9	16
	Figure 10 — Working wind – Horizontally outwards – Toeboard	17
	Table 10 — Loadings and requirements for Figure 10	17
6.3	Evaluation of the recorded test results	18
6.4	Working wind loading	18
6.5	Maximum velocity pressure	18
6.6	Application of the wind loads to the edge protection structure – Overturning	18
7	Test samples, equipment, and procedures	19
7.1	Samples	19
7.2	Test equipment	19